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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Doo-sik Joo

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EXAMINER

SINGH, SATWANT K

ART UNIT

PAPER NUMBER

2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/670,334	Applicant(s) JOO, DOO-SIK	
	Examiner SATWANT K. SINGH	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 17-19 is/are allowed.
- 6) ☒ Claim(s) 4,5,7-13,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 6 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 10 January 2008.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 4, 8, and 17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 5, 7-13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanabusa et al. (US 6,926,381) in view of Matsumoto (US 6,314,252).
5. Regarding Claim 4, Hanabusa teaches a white line compensation method of an image printing apparatus having a pickup roller, comprising: information in relation to position of the sheet of paper at which a white line would be produced (Figs. 17 and 18, white spaces encountered in the print buffer) (col. 16, lines 38-48); feeding the sheet picked up by the pickup roller along a set sheet feeding path (feeding media from automatic sheet feeder) (col. 5, lines 60-67, col. 6, lines 1-15); detecting whether the sheet reaches a set reference position (Fig. 17, S1707, is the current line all white data); and upon detecting that the sheet has reached the set reference position, controlling a

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sheet feeding rate by using the information in relation to a position of the sheet at which the white line would be produced depending on the sheet size information (line feed amount) (col. 17, lines 53-67, col. 18, lines 1-27).

Hanabusa et al fails to teach storing information via a storage unit regarding sheet sizes of a sheet of paper.

Matsumoto teaches storing information via a storage unit regarding sheet sizes of a sheet of paper (main CPU stores sheet size and the like in the page memory 98) (col. 9, lines 3-11).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teaching of Hanabusa with the teaching of Matsumoto to control the feeding rate of the recording medium for increased throughput without sacrificing print quality.

6. Regarding Claim 5, Hanabusa et al teaches a method, wherein the control operation stops driving the feeding rollers for a predetermined period of time starting from the time when the white line would be produced on the sheet (geartrain ratio) (col. 6, lines 56-67, col. 7, lines 1-10).

7. Regarding Claim 7, Hanabusa et al teaches a method, wherein the control unit determines via the document position sensor that the sheet reaches the set reference position and controls the sheet to be fed at an initially set feeding rate when the sheet is detected to have reached at the set reference position until the time when the white line would be produced (once a line of black data is encountered, a skip amount is calculated) (col. 17, lines 53-67, col. 18, lines 1-27).

8. Regarding Claim 8, Hanabusa et al teaches an image printing apparatus in a multi-function machine, comprising: an interface unit to receive printing data transmitted from an external device (Fig. 3, parallel port 30, and USB port 33) (col. 5, lines 54-58); a storage unit to store information in relation to a position at which a white line would be produced in accordance with the size of a sheet of paper (Figs. 17 and 18, white spaces encountered in the print buffer) (col. 16, lines 38-48); and using the information to recognize a position of the sheet at which a white line would be produced Figs. 17 and 18, white spaces encountered in the print buffer) (col. 16, lines 38-48).

Hanabusa et al fails to teach an image printing apparatus in a multi-function machine, comprising: an operating panel to support character and/or number inputs to enable various functions supported by the multi-function machine; a scanning unit to scan data printed on the sheet ; a control unit to check if information regarding the size of the sheet queuing to print is input through the input part, and upon determining that information on the size of the sheet is input, and a sensor unit to detect operation states of individual peripheral devices in relation to the operations of the multi-function machine.

Matsumoto teaches an image printing apparatus in a multi-function machine, comprising: an operating panel to support character and/or number inputs to enable various functions supported by the multi-function machine (Fig. 2, input unit 82) (col. 8, lines 33-42); a scanning unit to scan data printed on the sheet (Fig. 1, scanner unit 4) ; a control unit to check if information regarding the size of the sheet queuing to print is input through the input part (sheet size) (col. 8, lines 33-42), and upon determining that

information on the size of the sheet is input (sheet size) (col. 8, lines 33-42); and a sensor unit to detect operation states of individual peripheral devices in relation to the operations of the multi-function machine (main CPU performs two way communications with the printer and serial communication with the scanner) (col. 8, lines 43-54).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Hanabusa with the teaching of Masumoto to allow a user to use the printing functionality of the copying machine.

Regarding Claim 9, Hanabusa et al fails to teach an image printing apparatus, further comprising a facsimile unit, including: a modem to receive and transmit facsimile data from and to external devices connected to a Public Switched Telephone Network; and a Line Interface Unit to enable mutual communications between the modem and the Public Switched Telephone Network.

Matsumoto teaches an image printing apparatus, further comprising a facsimile unit, including: a modem to receive and transmit facsimile data from and to external devices connected to a Public Switched Telephone Network; and a Line Interface Unit to enable mutual communications between the modem and the Public Switched Telephone Network (image data is sent through a public line) (col. 4, lines 55-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Hanabusa with the teaching of Masumoto to allow a user to use the facsimile to perform the printing functionality of the copying machine.

9. Regarding Claim 10, Hanabusa fails to teach an image printing apparatus, wherein the facsimile data received through the Public Switched Telephone Network is transmitted to the Control unit via the modem and the Line Interface Unit.

Matsumoto teaches an image printing apparatus, wherein the facsimile data received through the Public Switched Telephone Network is transmitted to the Control unit via the modem and the Line Interface Unit image data is sent through a public line) (col. 4, lines 55-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Hanabusa with the teaching of Masumoto to allow a user to use the facsimile to perform the printing functionality of the copying machine.

10. Regarding Claim 11, Hanabusa teaches an image printing apparatus, further comprising a printing unit, including: an ink cartridge to fire ink on the sheet (Fig. 5, ink tanks 43a-43d)); a carriage return motor to drive the ink cartridge (Fig. 5, carriage motor 39); a line feed motor to transport the sheet to record print data (Fig. 5, line feed motor 34); a motor driver to drive the carriage return motor and the line feed motor according to the controls of the control unit (Fig. 5, circuit board 35); a printer head that reciprocates to the left and to the right directions to carry out printing jobs (bidirectional printing); a plurality of nozzles with discharge holes provided to the printer head (dual print heads); a printer head driver to drive the printer head to fire ink via the nozzles (Fig. 5, carriage 45) (col. 7, lines 12-27).

11. Regarding Claim 12, Hanabusa teaches an image printing apparatus, further comprising: a document position sensor to detect whether the sheet fed along a sheet feeding path reaches a set reference position (skip amount); and a control unit to drive the line feed motor (once a line of black data is encountered, a skip amount is calculated) (col. 17, lines 53-67, col. 18, lines 1-27).

12. Regarding Claim 13, Hanabusa teaches an image printing apparatus, wherein the control unit stops driving the line feed motor for a predetermined period of time starting from the time when the white line would be produced on the sheet (geartrain ratio) (col. 6, lines 56-67, col. 7, lines 1-10).

13. Regarding Claim 15, Hanabusa teaches an image printing apparatus, wherein the control unit predicts the time when the white line is produced on the sheet by using the sheet size information (paper velocity) (col. 13, lines 60-67, col. 14, lines 1-4).

14. Regarding Claim 16, Hanabusa teaches an image printing apparatus, wherein the control unit continues to feed the sheet at the initially set feeding rate after the predetermined period of time lapses (geartrain ratio) (col. 6, lines 56-67, col. 7, lines 1-10).

Allowable Subject Matter

15. Claims 1-3, and 17-19 are allowed.

16. The following is a statement of reasons for the indication of allowable subject matter: Claims 1 and 17 teach similar subject matter as the prior art of Hanabusa et al. However claims 1 and 17 are allowed for the reasons pointed out by applicant's remarks filed 10 January 2008 (page 7, 3rd paragraph). Specifically, the prior art of Hanabusa

fails to disclose "***a different feeding rate less than the initially set feeding rate***" and "***decreasing the initially set feeding rate***".

17. Claims 2, 3, 18, and 19 are allowed for being dependent on an allowable base claim.

18. Claims 6 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 6 and 14 would be allowable for the same reasons as for claim 1 listed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SATWANT K. SINGH whose telephone number is (571)272-7468. The examiner can normally be reached on Monday thru Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Satwant K. Singh
Examiner
Art Unit 2625

Sks

/Mark K Zimmerman/
Supervisory Patent Examiner, Art Unit 2625